

W5YI

Nation's Oldest Ham Radio Newsletter REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable. May be reproduced providing credit is given to The W5YI Report.

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FCC Announces Consumer RF Interference Policy

Radio frequency interference (RFI) in consumer electronics products has dogged radio amateurs for decades. RFI may seem like "old news". The FCC has just announced a formal Public Notice of its RFI policy, however, that should assist hams and those experiencing interference.

At first glance, the policy statement (reproduced below) may appear not to contain any breakthroughs. The FCC is still not requiring RFI labeling of consumer electronics products. Nor has it adopted standards for interference immunity.

What makes the Public Notice special is that the FCC flatly states that the cause of most RFI to home equipment is in the design or construction of the home equipment.

Amateurs have long recognized this fact. But now the FCC has conceded the point in writing. It is a statement from FCC HQ in Washington -- and not merely the opinion of local FCC public service staff.

The statement points to the need for dealers and manufacturers to protect their products. Some indication that the FCC is putting this policy into practice is found in another publication, FCC Bulletin CIB-10 (reproduced below, without attachments).

CIB-10 states that telephone RFI is a "technical problem, not a law enforcement problem," to be remedied by use of "protected" telephone equipment, and that it does not mean that the radio ope-

rator is doing anything illegal. The bulletin invites consumers to file complaints -- with the manufacturers, not the FCC!

The bulletin states that "interference problems begin at the factory" and "current FCC regulations do not address how well a telephone blocks out radio communications."

Amateurs may benefit from using the following policy statement and CIB-10 in their attempts to resolve RFI problems. The CIB Home Page mentioned below is on the FCC's World Wide Web site on the Internet, <http://www.fcc.gov>.

PUBLIC NOTICE, Released: April 5, 1996
Federal Communications Commission
1919 M St. N.W., Washington D.C. 20554

FCC POLICY FOR HANDLING COMPLAINTS OF INTERFERENCE TO HOME ELECTRONICS EQUIPMENT

Each year the FCC receives thousands of complaints of interference to televisions, radios, audio systems, telephones, and other home electronics equipment. In most instances the FCC cannot resolve the problem because the cause of this interference is the design or construction of these products and not a violation of any FCC rule.

To help consumers deal with these interference problems, basic information concerning interference solutions is now available on the Internet

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through the FCC Compliance and Information Bureau Home Page. This basic information includes the CIB Interference Handbook and the CIB Telephone Interference Bulletin. The CIB Interference Handbook includes a list of equipment manufacturers who provide specific assistance with interference problems. The list also is available through the Commission's Fax on Demand at 202-418-2830. Callers should request document number 6904.

Involving dealers and manufacturers in the resolution process should give them knowledge of the problems and provide both the opportunity and incentive to protect their products through customer service.

At the same time, however, it should be emphasized that the Compliance and Information Bureau will continue to take appropriate enforcement action where it has been determined that the interference is caused by violations of the Communications Act or the Commission's rules or policies.

FCC Bulletin CIB-10

WHAT TO DO IF YOU HEAR RADIO COMMUNICATIONS ON YOUR TELEPHONE

Interference occurs when your telephone instrument fails to "block out" a nearby radio communication. Potential interference problems begin when the telephone is built at the factory.

All telephones contain electronic components that are sensitive to radio. If the manufacturer does not build in interference protection, these components may react to nearby radio communications. Telephones with more features contain more electronic components and need greater interference protection. If you own an unprotected telephone, as the radio environment around you changes, you may sometimes hear unwanted radio communications.

Presently, only a few telephones sold in the United States have built-in interference protection. Thus, hearing radio through your telephone is a sign that your phone lacks adequate interference protection. This is a technical problem, not a law enforcement problem. It is not a sign that the radio communication is not authorized, or that the radio transmitter is illegal.

Because interference problems begin at the factory, you should send your complaint to the manufacturer who built your telephone. Use the attached complaint card to request help. Follow the instructions on the next page.

You can also stop interference by using a specially designed "radio-proof" telephone, available by mail order. A recent FCC study found that these telephones, which have built-in interference protection, are a very effective remedy.

Interference problems in telephones can sometimes be stopped or greatly reduced with a radio filter. Install

this filter at the back of the telephone, on the line cord, and/or at the telephone wall jack. Radio filters are available at local phone product stores and by mail order.

To get started, follow these steps: If you have several telephones, or accessories such as answering machines, unplug all of them. Then plug each unit back in, one at a time, at one of your wall jacks. Listen for the radio communication. If you hear interference through only one telephone (or only when the answering machine is plugged in), then the problem is in that unit. Contact the manufacturer of that unit for help.

Alternatively, simply stop using that unit, replace it with a radio-proof model, or install a radio filter. (NOTE: Only a very small percentage of interference problems occur in the outside telephone lines. Your local telephone company can check for this type of problem.)

Next, it's important to follow through and contact the manufacturer. Telephone manufacturers need to know if consumers are unhappy about a product's failure to block out radio communications. Also, the manufacturer knows the design of the telephone and may recommend remedies for that particular phone.

To file a complaint, cut out the card below along the dotted line. Fill in the card and mail it to the telephone manufacturer. To help the manufacturer select the right remedy, mark on the complaint card what type of radio communication the phone is receiving. You can identify the type of radio communication by listening to it. There are three common types:

- 1) **AM/FM broadcast radio stations** - Music or continuous talk distinguishes this type of radio communication. The station identifies itself by its call letters at or near the top of each hour.
- 2) **Citizen's Band (CB) radio operators** - These radio operators use nicknames or "handles" to identify themselves on the radio. Usually, the CB operator's voice is clearly heard. You may also hear sound effects or other noises.
- 3) **Amateur ("ham") radio operators** - Amateur radio operators are licensed by the FCC. They use call letters to identify their communications. The amateur's voice can be heard but may be garbled or distorted.

Cordless telephones are low-power radio transmitters/receivers. They are highly sensitive to electrical noise, radio interference, and the communications of other nearby cordless phones. Contact the manufacturer for help in stopping interference to your cordless telephone.

Final note: Current FCC regulations do not address how well a telephone blocks out radio communications.

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At present, FCC service consists of the self-help information contained in this bulletin.

The FCC strongly encourages manufacturers to include interference protection in their telephones as a benefit to consumers. The telephone manufacturing industry has begun to develop voluntary standards for interference protection. The FCC will continue regular meetings with manufacturers and will closely track the effectiveness of their voluntary efforts.

If you are not satisfied with the manufacturer's response, contact the Electronic Industries Association, 2500 Wilson Blvd., Arlington, Virginia 22201, phone: (703) 907-7500.

FCC SUSPENDS AMATEUR RADIO LICENSE

Intentional jamming and on-air indecency charged

In what may signal a new enforcement policy, the FCC has suspended the Technician Plus amateur operator license of Irvin J. Foret, KB5UJD of Metairie, Louisiana, for a two year period effective April 20, 1996. Generally, the Commission allows a ham operator to continue operations while his fate is being determined. Section 303 of the Communications Act provides for license suspension when FCC rules are violated.

The FCC said it "...has received numerous complaints about interference to ongoing amateur radio operations in the New Orleans, Louisiana area." An FCC investigation ensued and Commission personnel monitored Foret's transmissions on December 4, 1995 and again on January 15 and 29. The conclusion was that his on-air transmissions constituted willful or malicious interference to other amateurs.

During a station inspection, Foret denied that he made the unidentified transmissions which were termed obscene and indecent ...and included music which is another violation of the amateur rules.

The FCC said the transmitted remarks were made outside the 10:00 p.m. to 6:00 a.m. "safe harbor" period at a time when children were likely to be listening. The courts have held that amateur transmissions should be treated in the same manner as in the broadcast service. It is not necessary to prove that there were actually children in the audience to establish indecency.

The FCC is now considering issuing an "Order of Forfeiture (a monetary fine) ...in an amount not exceeding the statutory maximum for the willful and repeated violations..." The FCC could also make the amateur operator license suspension effective for the remainder of its term.

Foret, however, is first being given an opportunity to present evidence at a hearing. If Foret does not request a hearing, the FCC will take disciplinary action based on the investigative record and any written statement submitted by Mr. Foret.)

VE EXAMINATION DOCUMENTS RELEASED BY FCC

ARRL wanted the incriminating material kept confidential

According to an April 17th Order, the FCC has denied an ARRL request that certain supporting documents concerning alleged irregularities at a VE examination session held in February and March 1994 at Quapaw, Oklahoma not be released. There had been a question as to whether applicants examined at these sessions had prior access to the contents of their amateur radio operator license examinations prior to testing.

William (WW6E) and Mary (N6NOG) Buckner (both volunteer examiners), and applicants: Robert Farni (KB0MKL) and Troy Bourland (KB0MYT) sought release of the materials under the Freedom of Information Act (FOIA.) The League had asked that the "...documents not be made available to the public" and requested that they be returned to the ARRL if they were not needed for an investigation or enforcement action.

The ARRL-VEC temporarily suspended the accreditation of the VEs involved. Based on information the League supplied, the FCC required that the candidates be retested. When none of them agreed to the retesting, their newly obtained licenses were scheduled to be canceled or downgraded.

The FCC notified the ARRL that it intended to release the requested materials with certain deletions "...necessary to avoid disclosing investigative techniques or procedures." The ARRL said it was concerned that release "...would interfere with the investigation, reveal the ARRL's investigatory techniques, compromise tests currently in use, and disclose the identities of persons not under investigation, thereby invading their privacy or revealing potential informers and confidential sources."

After the investigation was complete, the FCC said it would release the documents but withhold the examinee's names and certain identifying information from an examinee's letter. The ARRL again asked that no materials be released.

Upon further review, the FCC concluded that the materials requested, with the deletions specified should be released. The FCC did agree, however, not to release certain Morse code testing material. The Commission also said that under the law, the documents in question could not be returned to the ARRL since they had become the subject of an FOIA request. (Action by the FCC, April 8, 1996.)

HAM OPERATOR ALLEGED TO HAVE JAMMED POLICE CALLS AND DISPATCHED TAXICABS

Two daily newspapers (the New York Post and Long Island Newsday) reported last week that Michael A. Abbey, N2LPD of Great Neck, New York was caught using his amateur radio equipment to reroute taxicabs

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and jam Long Island police communications. Abbey reportedly had been dispatching drivers on fictitious trips.

Abbey, a 19-year-old Queens College computer student is also suspected of disrupting police radio conversations in New York City. He was arrested April 16 after officers caught him in the act of making radio transmissions from his Great Neck bedroom, Nassau police said. He was illegally broadcasting on a frequency used by the Friendly Car Service at the time.

Abbey was booked at the Sixth Precinct police station and ordered to appear in First District Court in Hempstead on two counts of eavesdropping, a felony and one misdemeanor count of obstructing governmental administration. His lawyer said Abbey probably will plead not guilty at arraignment. He faces up to eight years in prison if convicted.

The Newsday newspaper story said that the police "...displayed thousands of dollars worth of radio transmitting equipment and guidebooks taken from Abbey's room and said police have recovered audiotapes of Abbey allegedly playing music over the air and interrupting police chatter in the villages of Kings Point and Great Neck Estates."

HAM OPERATOR HELPS RESCUE SINKING YACHT

An April 4th news story appearing in the Los Angeles Times is better ham press! It tells how amateur radio operator, Bob Karon, AA6RK of Encino, California heard a frantic "Mayday! Mayday! call coming from a sinking vessel thousands of miles away! Using his HF radio equipment, Karon contacted the yacht that was sinking in the south Caribbean Sea with four people aboard and a storm approaching.

The Cambria, a 44-foot Canadian yacht was grounded on a reef about 150 miles southwest of Jamaica with a hole in it and water was coming in fast. The vessel's skipper said the boat would sink within an hour. And to make matters worse, a storm was approaching. The grounding left the vessel on its side on the reef which made communications extremely difficult. It was a bad situation.

Karon telephoned the Coast Guard in Los Angeles, and was transferred to its Miami station. AA6RK became the only link between the sinking vessel and potential rescuers. The Coast Guard determined that its closest rescue team was 2 1/2 hours away. But a cargo freighter, was about 25 miles away and could reach the Cambria in an hour and a half which might be too late. Fortunately it was not.

Shallow waters prevented the ship from reaching the grounded yacht, but the freighter's crew sent a life-boat and rescued the skipper and passengers just as the storm arrived. The freighter took them to Aruba.

Karon received a letter of commendation from the

Coast Guard. "Your professional and humanitarian actions are heartily commended and demonstrate the finest traditions of assisting mariners in distress," said Coast Guard Capt. Robert Gravino in his letter to Karon.

TAPR OFFERS GROUP GPS PURCHASE

Tucson Amateur Packet Radio, Inc., working with Bob Bruninga, WB4APR, (Glen Burnie, MD) will be making a group purchase on Garmin 20 GPS units. For full details on the purchase as well as information regarding the unit, please see web page <http://www.tapr.org/gps>

The price will be \$165.00 for members of TAPR, \$175.00 for non-members. This kit will include:

- Garmin GPS-20 (MultiTrac8 sensor) engine (1.83" x 2.74" x .45".) The Garmin GPS-20 is similar to the Garmin GPS-45.
- RF pig tail with connector for unit - (one end is the MCX male connector and the other end will be non-connected - see below)
- power/data cable with connector shell and pins. (The connector is a subminiature PCB edge connector and will need to be built - see below)
- Documentation

TAPR will be taking orders for 50 units, which is the minimum purchase. Once 50 units have been purchased TAPR will order the Garmin units. TAPR will deposit money when the units are ordered from Garmin and ship when the units arrive from Garmin. It is expected that the demand will be high, thus a short period should be required to receive the 50 orders.

Please note: This is not an enclosed/sealed unit. It is assumed that the purchasers will be installing the unit in another enclosure for normal and/or experimental operations.

If you would like to order one of these units, you can e-mail tapr@tapr.org; phone (817) 383-0000, or fax (817) 566-2544. Office Hours: Tuesday - Friday 9am - 12pm, 3pm - 5pm Central Time. These units will be useful with current APRS software and the upcoming TAC (Totally Accurate Clock) kit that Tom Clark, W3IWI, has begun discussing with TAPR to do as a kit in the future. For more on the TAC project check [ftp://aleph.gsfc.nasa.gov/GPS/totally.accurate.clock/](http://aleph.gsfc.nasa.gov/GPS/totally.accurate.clock/)

Questions concerning the unit and details on the buy will be handled on the TAPR APRS Special Interest Group list. To subscribe, e-mail: listserv@tapr.org. In the message type: subscribe aprssig YourFirstName YourLastName. The server will then send you a message back. Announcements on the status of the shipment will be made to the TAPR APRS SIG and TAPR-BB lists.

Shipping and Handling within the US will be \$7.00 by UPS Ground unless otherwise requested by purchaser.

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EMERGING TECHNOLOGY

■ **Microsoft wants to make a new high speed PC the main component of home entertainment centers.** They have just unveiled a new hardware/software initiative called SIPC - for the "Simply Interactive Personal Computer."

SIPC is obviously Microsoft's answer to the low price Internet appliances being planned by a number of companies. The device accepts both PC monitor and TV screen display. Microsoft will develop the SIPC software.

The objective is to link such consumer electronic devices as television, stereo components and videocassette recorders with computer control and Internet access.

Several big name consumer electronic and personal computer makers are involved in manufacturing the SIPC hardware which will transfer data at 400M bits/sec. This will enable users to take advantage of high speed cable modems, digital phone lines and fast DBS (direct broadcast satellite) data delivery.

■ **After Bill Gates demonstrated how future PCs with Internet access will connect to big screen TV sets and manage entertainment and consumer devices, Thomson Consumer Electronics announced it would build a big screen TV with Internet connection circuitry.** Net-TV, Inc., unveiled a big screen PC that receives television and Gateway 2000, Inc., has a Pentium PC with a 31-inch digital screen. Panasonic and Sony will also build 32 to 40-inch screen Web TVs.

■ **For those of us who have trouble programming a VCR, help is on the way!** The Gemstar Guide -VCR Plus+ Instant Programming System permits television viewers to receive an interactive on-screen TV guide and to easily set their VCRs to record upcoming shows. Viewers receive the listings - including a "Now" video window of programs in progress - through the VBI (vertical blanking interval) - an unused portion of the television broadcast signal. And by pressing a VCR Plus+ button on a keypad, users can record upcoming TV programs once, daily or weekly. You merely enter your zip code and whether you receive over-the-air or cable to set your

local channel lineup. Broadcast and cable networks are already transmitting the enabling VBI signals. All that is needed are TV sets and VCRs in use that incorporate the new technology. Industry expects that some 5 million Guide-VCR Plus+ equipped TVs and VCRs will be sold this year. There is no cost to the consumer for the new service ...that is once people pay the extra \$30 to \$50 for an equipped TV or VCR.

■ **Japan's Matsushita Electric Industrial Co., (Panasonic) has a computer-less way to print out requested text and graphics from Web pages on a fax machine.** Subscribers access the Internet through commands on a telephone keypad. Eliminated is time-consuming "browsing" especially if you know what you want and where to find it.

■ **Some companies selling goods on the Internet have discovered a safer (and amazingly simple) way of making credit card transactions on the Internet.** The solution is from Portland Software (Portland, OR.) When customers key in a credit card number and "click" on purchase, your computer automatically dials the same credit card network used by banks, stores and restaurants. Your credit card number never travels on the Internet. Both the customer and the online seller receive an online "approval" that the transaction went through.

petitively priced (\$2,500 range) PC's that have built in graphic and OCR scanners. Just feed in a graphic or printing on a piece of paper (even a newspaper clipping) into a slot on your PC keyboard and it appears on screen automatically ...ready for cropping, rotating, flipping or editing! There are no commands to enter at all!

■ **And AT&T Corp., has a new software product called "Watson ASAP" which adds voice control and speech processing capability to personal computers ...such as "Give me my messages" or "Print my e-mail!" It even permits your PC to read aloud from a stored document! (But they still can't bring you coffee!)**

■ **Amid staggering losses and more layoffs, word has leaked out how Apple Computer intends to market its products in the future.** New Apple CEO, Gilbert Amelio is reported as saying at an internal meeting that Apple can't compete on a price basis since it must do everything itself. On the other hand, IBM format machines get most of their research and development work financed by software and chip companies such as Microsoft and Intel. The marketing strategy will be for Apple to have a public perception of reliability, quality and higher value which commands a premium price. The previous CEO slashed prices and promoted low-end machines in order to increase market share which led to a bath of red ink. Nearly 3,000 people have now lost their jobs at Apple.

■ **But that doesn't mean that only high end Apple machines will be available. Far from it. They just won't be made by Apple! Be on the lookout for a profusion of Macintosh clones!** IBM and Motorola have both signed Apple operating system licensing agreements which they plan to sublicense to firms everywhere who want to make entry-level Mac clones. Besides providing a larger market for Apple software, the objective is to boost sales of IBM/Motorola PowerPC developed chips which are the "brains" of Apple Macintosh computers. There is big concern about the mass exodus of its remaining Apple software developers to the dominant Intel/Microsoft PC standard.

■ **We keep hearing how bad sales are in the personal computer**

PERSONAL COMPUTERS

■ **Cyrix Corp., who have recently cloned the high power Pentium chip are entering the direct mail order PC business!** The idea is to promote the Cyrix brand as a serious competitor, increase market awareness and to entice other PC makers to use their recently introduced "6x86" (also known as the M1) microprocessor which sells at a substantial discount from Intel prices. A Cyrix 6x86 133 MHz PC lists for \$2399. AMD (Advanced Micro Devices, Inc.) also has begun shipping Pentium-class clone chips which were completed later than expected.

■ **The digital secretary has arrived! Let your PC do the reading, drawing and typing!** Both Compaq and Hewlett-Packard are now offering com-

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industry. That is, PC demand is not increasing by 25% annually as it has for the past five years. Supposedly, corporate buyers no longer think they need to upgrade PC's past the "486" and lower Pentium-speed level since they can't use all that computing power now. Brand name computer companies who make "paper thin" profits and exist through high volume are concerned. The thinking now is that the coming sales bonanza will come from the sale of low cost machines ...especially those that browse the Internet. It could spell big trouble for hardware firms if they catch on. Still, Intel is not convinced! They are banking on continued strong growth and have invested heavily (\$13 billion) in chip plants.

■ **Computing from your pocket!** Microsoft has purchased Aha Software Corp., a Silicon Valley company with unusual technology for editing handwriting on mobile computers using pen-based computers. Microsoft will use the technology in developing an operating system for wallet sized PCs.

■ **If the New York Toy Show is any indication, there will be a slew of toys available this Christmas that lash to the family's personal computer!** For example: Fisher-Price has a \$150 driving machine that allows pre-schoolers to take fantasy trips on a PC.

NEWS FROM THE INTERNET

■ **Microsoft wants to be thought of as a media (solutions) company rather than a software programmer.** They have major alliances and joint ventures cooking with dozens of major U.S. corporations including NBC (broadcasting), DreamWorks SKG (motion pictures), MCI (telecommunications), DirecTV (satellites), Intel (chips), credit card companies, banks and many more ...even direct competitors such as America Online.

Bill Gates did an about-face exactly a year ago when he authored what has become internally known as his "Internet Tidal Wave" memo. Now everything Microsoft does is Internet related. Gates is gathering every potential player under his wing. The goal, to keep cyberspace Microsoft and PC-based and not by littered with "boxes."

■ **And while we are on the subject, do NOT sign any long term contracts for telephone and especially Internet service!** Prices are nose-diving drastically! So much so that some are having second thoughts. Sprint's "Fridays are Free" long distance promotion, for example, has cost them a bundle. Firms are saving their long distance calls - especially overseas calls - for Friday!

As predicted here, phone companies (both the local Bell systems and long distance carriers) are moving into the Internet connection business. The going price for an Internet connection these days is \$19.95 a month for unlimited service ...and less. And some are offering free trial periods or Internet service as a freebie when you buy something else. Check it out!

■ **Terming the Internet as a "collapsing market" - MCI is now turning more toward business-oriented pursuits.** Digital Equipment, MCI and Microsoft have entered into a joint venture to develop and offer corporate data "Intranets" (private web-based Internet networks) to connect employees and outlying locations. Workers will be able to telecommute to work from their home office anywhere in the world.

■ **A research group sponsored by 30 corporations studying the American Internet User found that:**

- 1) Internet users spend 6.6 hours a week on the Net which they previously used to watch TV or videos, listen to the radio ...or to talk on the telephone. Average session is 68 minutes.
- 2) 9.5 million Americans (including 1.1 million children under 18) now use the Internet. (An earlier survey by Dun & Bradstreet had said the figure was over 20 million.)
- 3) half got on the Internet in the past year.
- 4) American Online is the most popular Internet access method ...followed by a direct connection.
- 5) Average age of a U.S. Internet user is 36 years old. (European user: 31.) 85% are male, half are married. Median income: \$50-60K. Most users are under thirty; fewest: over fifty.
- 6) Personal (browsing and entertainment) use of the World Wide Web far outstripped business and academ-

ic use. 75% of users browse the Web every day.

7) Largest user occupation categories: computer-related, educational and professional.

■ **Type "casino" into an online search engine (such as Yahoo) and you will find that there are some 300 gambling-related sites on the Internet's World Wide Web.** To avoid running afoul of U.S. laws against interstate gambling via the telephone, online casino operators have set up shop in the Caribbean and Cuba where gaming laws are more liberal. For the most part, they concentrate on overseas gamblers. But it is only a matter of time before they figure out a way for Americans to make use of their PC slot machines. The thought has the gambling industry and race tracks very concerned.

■ **Let your computer do the spending!** Digital Equipment Corp., has quietly patented a system called "Millicent," a website payment system that charges fractions of pennies to surfers who visit various commercial sites. You load up on digital cash which is automatically spent when you "hit" certain sites. Credit card companies and digital banks credit site owners with as little as a tenth of a penny per hit. (10,000 hits cost as little as ten bucks.)

■ **The (Denver-based) Jones Internet Channel has debuted on cable in some areas.** It uses a 10 megabit-per-second digital cable modem to access the Internet. That is about 400 times faster than over-the-phone line analog modems. Cost for the premium service (which includes the hardware) is \$40 per month for unlimited access. There is also a one-time \$99 charge for installation. Not many cable systems can yet handle digital two-way data.

THE ON-LINE WORLD

■ **Depending on who you are talking to, things are either looking bright or bleak for the Prodigy Information Service.** The stumbling consumer online service plans to relaunch as a completely new interactive service on the World Wide Web this summer. The fledgling Microsoft Network (MSN) now has more subscribers than Prodigy, one of

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the oldest.

Here is what our spies tell us. In a last ditch effort, Prodigy will be splitting into two services. The present service will be renamed Prodigy Classic. The new one: Prodigy Internet.

Prodigy is known to have already signed software distribution agreements with nearly every computer maker to include Prodigy Internet pre-installed on their hard drives. Beginning this fall, you won't be able to buy a PC without it.

All of Prodigy's marketing effort will now be put into Prodigy Internet which is planned to be the surviving service. None of Prodigy's programming will be propriety, instead it will be based on Internet standards. Its sophisticated "hip" content and direction will be entirely new ...and not a copy of the present Prodigy. Emphasis will be primarily placed on catering to and satisfying the online user rather than the advertiser ...a mistake previously made.

Prodigy Internet will carry a subscription charge which will be completely separate from its current service. While Prodigy didn't say so, we heard that the older Classic service will eventually be shuttered. Current users will have to migrate to the web. That's the game plan we pieced together. It might work.

That's if Prodigy can last that long. It is really a long shot we think and things are currently not going well for Prodigy. They laid off more than a hundred employees last week and subscribers are already flocking to other services ...especially America Online and CompuServe. Prodigy now has less than half the staffers it had two years ago. Unlike AOL (5 million subscribers) and CompuServe (4.7 million), Prodigy now won't say how many subscribers it has. We heard 700,000. AOL had only 1.5 million subscribers at the end of 1994!

Co-owners, IBM and especially Sears Roebuck are interested in getting out of the consumer online business and a buy-out effort headed up by new Prodigy President Ed Bennett is underway. Management is trying to raise \$250 million for the leveraged buyout and an investment banker has been retained.

While Sears and IBM aren't too excited about selling out for 25¢ on the dollar, it would be a way of getting out from under a money loser with "something." Prodigy has already cost them over \$1 billion and the service has never

made a profit. There still is an outside chance that IBM could take over the service.

BROADCASTING & CABLE

■ **Cable giant Tele-Communications, Inc. and Proctor and Gamble are planning to create an on-line grocery store!** Using high speed cable modems, shoppers will order goods from virtual shelves. The site will also sell advertising. A "turnkey template" is being developed for use by the grocery industry. Kroger, the nation's largest grocery chain already permits online shopping in Columbus, Ohio through its <http://www.foodcoop.com/kroger> website. TCI is also talking to America Online about a joint venture involving its Digital City concept.

AMATEUR RADIO BRIEFS

■ **The W5YI-VEC, Inc., is the only volunteer examination coordinator that files ham exam results electronically right from the VE team.** All other VECs file electronically after receiving the test session paperwork by mail from their VE teams.

Up until recently, the W5YI-VEC had a special arrangement with MCI for low cost email service. But a price increase, a new monthly minimum and planned additional charges (beginning August 1) for messages received from the Internet made retaining the MCI Mail service a hardship for many VE teams.

A decision was made to use the Internet as the file transfer medium. It proved to be easier said than done. We retained an outside consultant to help us make some basic decisions on the easiest and most economical way to transfer VE files to the VEC Office. Those decisions involved determining which platform (hardware and operating system) and file transport (online service and file attachment) means we should use.

We elected to go with IBM/compatible PCs running Windows 3.1, 95 or NT since this platform is now by far the most popular. Tests using various consumer online services proved unsuccessful since they use propriety email standards. Online services do not really "connect" with the Internet, they "interface" using a

translation gateway. It is in that translation that problems crop up since file attachments are frequently dropped or slightly modified which invalidates our checksum security features.

The single most prevalent online service used by our VE teams we found was a direct Internet connection. We then looked into standards that Internet Service Providers use for mail handling.

POP3 (post office protocol - version 3) determines how mail is transported on the Internet and held on access provider mail servers (the post office) for retrieval. SMTP (Simple Mail Transport Protocol) specifies how mail is exchanged between computers and MIME (Multipurpose Internet Mail Extensions) support enables accurate transfer of ASCII and binary files between different computers.

We then looked for a low-priced email product with file attachment capabilities which supported these standards. The "Eudora Light" mail handler (which is freeware - the cost hams like most!) supports these standards thereby permitting accurate file transfer across the Internet.

Eudora email, a Qualcomm (San Diego, CA) product, has two versions. Eudora Light and Eudora Pro (a commercial version with more features.) Some well known hams work at Qualcomm - such as Phil Karn, KA9Q and Franklin Antonio, N6NKF - author of AMSAT's "Instanttrack" satellite tracking software.

Early tests have proven Eudora to be a superior product. And it can indeed accurately transfer VE files to us without modification. We are now in the BETA test phase. Our first "live" VE file transfer was the Natchez (Mississippi) Hamfest held April 13 where 22 applicants got new licenses or upgraded. Their ham license information was available (by calling us at 817/548-8200) within 24 hours of file arrival here at the W5YI-VEC Office which is almost instantaneous after VE transmission.

The W5YI-VEC office pre-screens the file before submission ...and later carefully reviews and compares the session paperwork once it arrives from the VE team against the examination file.

Let us know if your VE team has a direct Internet connection and would like to transfer your session files to us via the Internet. We will provide you with both the Eudora Light email and W5YI VE-to-VEC Electronic Filing software at no cost.

W5YI REPORT

Nation's Oldest Ham Radio Newsletter

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■ **Networking company, Novell Inc., of Orem, Utah has an innovative (and still unnamed) plug-in-the-wall LAN (local area networking) and appliance-switching device under development.** The bad news for ham operators is that the conduit is low power (less than a watt) high frequency RF (between 1 and 30 MHz) injected into the AC power lines. Operating under Part 15, the emission is spread spectrum with up to a 6 MHz bandwidth. FCC rules allow up to 250 microvolts of RF to be connected to public utility power lines. Certain frequencies are restricted from being used, but none are those allocated to the amateur radio service. The concern is that these RF devices will overwhelm sensitive HF radio receivers located within 200 to 400 feet of the system. And Novell wants the technology criss-crossing everywhere! Smart household appliances, lighting ...even personal computers are planned to be remotely controlled without hard wiring. And there are commercial applications ...such as soft drink distributors polling their machines to determine if they need to be refilled. And smart appliances could be diagnosed from remote service facilities. Utility companies and appliances manufacturers are very interested. A recent demonstration had RF 200 kilohertz wide centered at 4 MHz, near the 80 meter ham band. And there is talk about using 6 MHz. The wireless LAN/appliance switching device is expected to hit the marketplace within a year.

As of April 5, the FCC has reached the \$20 billion mark in total auction revenues to be deposited to the U.S. treasury. The agency has completed a total of six spectrum auctions and two others are still in progress. The auctions include: Nationwide Narrowband PCS, Interactive Video and Data Services, Regional Narrowband PCS, Broad and PCS (A and B blocks), Direct Broadcast Satellite, Multi-point Distribution Service, 900 MHz Specialized Mobile Radio and Broadband PCS (C block.)

In 1993, Congress gave the FCC authority to conduct spectrum auctions. At that time, the House Budget Committee estimated that auction receipts over a five-year period would reach \$10.2 billion. In 1994, the Congressional Budget Office estimated five-year auction receipts are \$8.1 billion while the Office of Management and Budget estimated auction receipts at \$12.6 billion.

"We have exceeded all expectations," said FCC Chairman Reed Hundt. "Auctions have proven once again to be a success not only by awarding licenses to those who value them the most, but also by decreasing the national debt."

The FCC's upcoming schedule is very active! This summer it plans to auction more spectrum to be used for Personal Communications Services in the smaller markets.

■ **It is beginning to look like President Clinton (or his successor) will get to shortly fill two FCC Commissioner seats.** We heard Commissioner Quello (a Democrat) will not seek reappointment and Commissioner Barrett (a Republican) will depart.

■ **Great Britain is also getting ready to have digital television.** And they may have it first! While British ministers talk about digital's improved picture quality and wider program choice, what they really want is to regain valuable analog spectrum. Around 40 RF channels of 8 MHz bandwidth are currently used to provide the present four national terrestrial TV services in the UK and a fifth will be introduced shortly. Only a fraction of that spectrum would be needed if the signals were digital. The government plans to tempt broadcasters to switch to digital by offering them free spectrum which they could use for 12 years without cost. The new regulatory framework requires TV broadcasters to simulcast on both

analog and digital systems. After five years (or when digital set penetration reaches 50%) a timetable will be established for withdrawing the analog channels. TV sets would then have to be labeled if they could not receive digital signals. "The need for sets to be clearly labeled is so that the public will not be misled when investing in a new TV set." The areas that have the highest penetration of digital services will be withdrawn first. The British government believes "...the digital market is likely to begin via digital set-top boxes that connect to existing TV sets." (Thanks Tony, G4FAI)

■ **Do you remember the story we did on pirate Free Radio Berkeley?** Steve Dunifer, 44 is still micro-broadcasting with 25 watts on 104.1 FM 24 hours a day even though he doesn't have a broadcast license. The station's range is about 10 miles. The FCC has been trying to shut him down, so far without success. Free Radio Berkeley started three years ago broadcasting three hours a week from different hillside spots in the Oakland/Berkeley, California bay area. Dunifer believes that micro-powered stations offer a way for the average person to communicate. Citing possible interference to licensed aviation, broadcasting and emergency services, the FCC fined Dunifer \$20,000 which he refused to pay. And a federal judge, who apparently couldn't see any harm refused to grant the agency an injunction to close Free Radio Berkeley. It has been on the air ever since. Today, nearly a hundred volunteers keep the station going round the clock. Their cost? About \$4,000 a year, financed by the sale of do-it-yourself micro-radio station kits. They consider what they do like the Internet.

On April 12, in U.S. District Court in Oakland, federal judge Claudia Wilken heard arguments from both sides. The FCC said unlicensed stations are illegal. Dunifer said he is unable to get a license under the agency's licensing scheme since the FCC does not license stations under 100 watts. Dunifer believes that under current rules, only the rich few can have a voice. Judge Wilken postponed issuing the injunction, instead she asked Dunifer to present facts showing that discrimination based on finances results in discrimination based on content. So, Free Radio Berkeley continues to stay on the air. To be continued...

WASHINGTON WHISPERS

■ **FCC Chairman Reed Hundt is apparently trying to make political points.** He wants broadcast networks to offer free TV prime time to presidential candidates for political debate during the last month of the campaign. Commissioner Quello believes the FCC has no business getting involved. Broadcasters are opposed to the idea since under the existing equal time law, broadcasters are required to offer free time to all fringe candidates if they offer it to any.

■ **While much has been much said about retaining the Federal Communications Commission as a government agency, the fact remains that it is the administration's fattest cash cow.**

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AMATEUR SERVICE GROWTH REPORT - APRIL 1, 1995 VS. APRIL 1, 1996

STATE	EXTRA		ADVANCED		GENERAL		TECH PLUS		TECHNICIAN		NOVICE		TOTAL		INC.
	1995	1996	1995	1996	1995	1996	1995	1996	1995	1996	1995	1996	1995	1996	
AL	1068	1145	1717	1720	1757	1789	2078	2329	2355	2640	1007	1007	9980	10630	6.5%
AK	319	329	539	535	625	638	527	586	644	700	438	429	3092	3217	4.0%
AZ	1425	1535	2535	2608	2631	2718	2735	3095	3465	3836	1235	1238	14026	15030	7.2%
AR	703	747	1033	1065	1032	1085	1181	1332	1625	1771	614	612	6188	6612	6.4%
CA	8480	8852	16064	16133	16500	16591	22074	23841	23940	26899	16934	16720	103992	109036	4.6%
CO	1187	1246	2087	2139	2160	2148	2178	2437	2213	2460	1311	1296	11136	11725	5.3%
CT	1088	1132	1572	1566	1927	1921	1745	1843	1268	1385	1669	1662	9269	9509	2.6%
DE	199	198	231	231	294	298	292	331	230	255	209	207	1455	1520	4.5%
DC	85	83	96	96	133	130	61	71	72	62	81	78	528	520	(1.5%)
FL	4193	4415	7872	8076	9183	9502	7628	6466	6309	6748	6739	6757	41944	43964	4.8%
GA	1495	1590	2539	2576	2592	2629	2931	3224	2815	3049	1488	1495	13860	14563	5.1%
HI	311	325	521	515	564	560	671	710	555	607	689	687	3311	3404	2.8%
ID	320	340	582	597	722	728	670	772	843	973	408	406	3545	3816	7.6%
IL	2555	2638	4184	4185	4803	4806	4737	5175	4254	4628	3539	3517	24072	24949	3.6%
IN	1487	1531	2410	2427	2755	2807	3296	3627	3022	3227	2051	2037	15021	15656	4.2%
IA	712	740	1444	1430	1501	1517	1164	1250	1057	1165	1056	1059	6934	7161	3.3%
KS	726	754	1145	1184	1592	1591	1316	1511	1544	1619	1036	1014	7359	7673	4.3%
KY	817	894	1199	1219	1431	1477	1650	1690	1907	2110	1201	1195	8205	8525	8.1%
LA	818	847	1402	1363	1402	1420	1372	1491	1462	1549	906	906	7315	7576	3.6%
ME	486	508	708	723	1034	1050	757	817	743	825	560	555	4288	4476	4.4%
MD	1481	1504	2279	2300	2244	2251	2109	2421	2159	2171	1486	1476	11758	12123	3.1%
MA	2032	2103	2806	2772	3308	3363	3185	3391	2252	2429	2262	2242	15845	16300	2.9%
MI	2152	2253	3643	3660	4263	4324	4192	4563	3974	4379	2615	2600	20839	21779	4.5%
MN	1157	1187	1974	2015	2333	2336	1944	2163	1856	2047	1303	1280	10567	11018	4.3%
MS	474	502	817	819	833	863	809	907	1028	1101	540	535	4501	4727	5.0%
MO	1350	1444	2240	2265	2615	2653	2256	2523	2294	2571	1528	1521	12283	12977	5.7%
MT	296	307	447	473	576	590	436	514	595	682	361	363	2711	2929	8.0%
NE	384	403	786	792	973	972	739	821	608	664	483	478	3973	4130	4.0%
NV	390	419	679	699	804	839	676	799	935	1006	362	365	3846	4127	7.8%
NH	619	664	740	764	974	972	962	1063	815	925	582	570	4692	4958	5.7%
NJ	2159	2206	3206	3217	3509	3533	3606	3861	2533	2719	2599	2598	17612	18134	3.0%
NM	587	618	908	939	890	909	812	926	1207	1356	377	369	4781	5117	7.0%
NY	3753	3876	5852	5855	6832	6820	6997	7524	6147	6641	6972	6886	36553	37602	0.1%
NC	1749	1874	2852	2910	2993	3095	3183	3592	3650	4100	1969	1968	16396	17539	7.0%
ND	155	162	246	248	373	380	303	347	328	344	251	244	1656	1725	4.2%
OH	3073	3181	4958	4992	5595	5627	7320	7882	5938	6542	4088	4020	30972	32244	4.1%
OK	914	949	1512	1529	1468	1483	1809	1960	1966	2321	1125	1111	8794	9353	6.4%
OR	1195	1262	2157	2200	2677	2741	2304	2638	2387	2576	1601	1590	12321	13007	5.6%
PA	3013	3118	4488	4534	5120	5235	5022	5433	3976	4272	3610	3585	25229	26177	3.8%
RI	323	342	363	384	533	538	562	636	344	371	417	407	2542	2678	5.4%
SC	650	714	1079	1112	1319	1368	1231	1396	1164	1316	690	677	6133	6583	7.3%
SD	170	180	317	318	379	384	245	275	261	269	174	175	1546	1601	3.6%
TN	1480	1523	2328	2394	2272	2327	2949	3231	2836	3129	1471	1463	13314	14067	5.7%
TX	4554	4772	7433	7601	7695	7826	8078	8854	8163	9012	4367	4345	40290	42410	5.3%
UT	458	483	809	832	744	769	1576	1718	2402	2808	747	743	6736	7353	9.2%
VT	250	260	329	336	425	437	388	428	467	519	228	230	2087	2210	5.9%
VA	2014	2131	3056	3111	3063	3089	3029	3446	3105	3286	2034	2013	16301	17076	4.8%
WA	2291	2432	3760	3826	4460	4567	4638	5187	4937	5440	3089	3074	23175	24526	5.8%
WV	550	589	731	742	930	951	1175	1275	1536	1805	856	838	5778	6200	7.3%
WI	1121	1187	1847	1866	2185	2194	1841	2013	2011	2201	1275	1262	10280	10723	4.3%
WY	175	182	242	244	274	287	280	311	364	401	217	218	1552	1643	5.9%
GU	57	64	54	51	61	63	88	108	144	177	169	168	573	631	10.1%
PR	263	286	569	581	697	754	2187	2333	509	629	4341	4255	8521	8838	3.7%
VI	57	58	54	54	83	79	57	66	63	69	45	46	359	372	3.6%
Other	104	121	75	86	92	108	80	126	289	331	61	64	701	834	19.0%
Tot:	69902	73203	115467	116916	128230	130130	136131	149464	133566	147219	97486	96639	680782	713558	4.8%
%	10.3%	10.3%	17.0%	16.4%	18.8%	18.2%	20.0%	20.9%	19.6%	20.7%	14.3%	13.5%	100%	100%	
% Inc.	+4.7%	+1.3%	+1.5%	+1.5%	+9.8%	+10.2%	+10.2%	+10.2%	+10.2%	+10.2%	+10.2%	+10.2%	+10.2%	+10.2%	

(*** = Other includes U.S. possessions and APO/FPO addresses.)

AMATEUR RADIO GROWTH STAGNATES AT THE HIGH FREQUENCY OPERATING LEVEL

Every so often we do a statistical comparison with prior years to determine the health of the Amateur Radio hobby. Here are the figures for April 1st for the last 15 years. These figures came from the FCC, Gettysburg, PA - except for the Technician Class figures between 1991 and 1994 - which were maintained by the VECs.

April 1,	1996	1995	1994	1993	1992
Extra	73203	69902	65575	62397	58543
Advanced	116916	115467	111597	110656	108303
General	130130	128230	125044	126011	123300
Tech. Plus	149464	136131	131479	126827	122175
Technician	147219	133566	101044	74843	45746
Novice	96639	97486	95608	99711	97922
TOTAL	713558	680782	630347	600445	555989
Increase:	4.8%	8.0%	5.0%	8.0%	9.6%
April 1	1991	1990	1989	1988	1987
Extra	54489	49346	47734	43970	41443
Advanced	105806	100156	99811	98408	97429
General	120496	114964	114606	113958	115015
Tech. Plus	117523	112872	105002	93675	85760
Technician	13320				
Novice	95449	82512	82259	82400	81045
TOTAL	507083	459850	449412	432411	420692
Increase:	10.3%	2.2%	3.9%	2.8%	0%
April 1,	1986	1985	1984	1983	1982
Extra	39225	36496	35056	32312	29939
Advanced	98765	97490	96195	94665	92691
General	117911	116888	117903	118994	119953
Tech. Plus	85142	80850	77911	75461	72889
Novice	79744	79051	85788	91717	82591
TOTAL	420787	410775	412853	413149	398063
Increase:	2.4%	(.5%)	(.1%)	3.8%	.5%

The number of U.S. amateur radio operators has been growing an average of 7% annually. Last year's gain, however, was the smallest since the FCC approved the no-code ticket in 1991. It is interesting to note that growth at the General, Advanced and Amateur Extra Class level is little more than 1% a year. Those are the ones that buy the high dollar HF gear. That's bad news for HF equipment manufacturers, importers and dealers who are universally struggling to maintain sales.

While the ham ranks have expanded by more than 200,000 during the last five years, more than 80% of that total has come at the entry level Technician and Tech Plus classes. The number of General, Advanced and Amateur Extra Class hams has grown only 30% over the last fifteen years while Technician and Tech. Plus operators have quadrupled from 70,000 to 280,000! Hardly any newcomers elect to begin as a Novice these days.

FCC REMOVES MANUAL RADIOTELEGRAPH REQUIREMENT FOR GMDSS EQUIPPED VESSELS

Manual Morse code has taken another step toward becoming a relic from the communications past. On April 5th, the Commission eliminated the requirement that Global Maritime Distress and Safety System (GMDSS) equipped vessels also carry manual Morse code radiotelegraph equipment. The FCC requested authorization for this change from the Congress and it was included in the Telecommunications Act of 1996.

Previously, Section 351 of the Communications Act required U.S. flagged cargo vessels of more than 1,600 gross tons and all flagged passenger vessels to carry a manual Morse code radiotelegraph installation when navigating in the open sea or on international voyages.

The radiotelegraph-based vessel safety system, however, is being phased-out internationally and is scheduled to be totally replaced by the GMDSS in three years. Thus, the Commission requested authorization and the Congress mandated that the FCC eliminate the radiotelegraph carriage requirement for vessels that were already GMDSS equipped, upon a determination by the U.S. Coast Guard that the vessel has GMDSS equipment installed and in good working condition.

The Global Maritime Distress and Safety System relies heavily on orbiting satellites and advanced digital communications to automatically transfer distress and safety information ship-to-shore. In addition, ships must carry an emergency position-indicating radio beacon (known by its EPIRB acronym) which floats free and gives the ship's position if the vessel sinks suddenly.

The old long-range 500 kHz radiotelegraph alerting system uses unreliable ship-to-ship communications while in the open sea and depends on telegraphy proficient radio operators to contact nearby vessels and good radio propagation. Since February 1995, all newly constructed ships must be outfitted with GMDSS equipment. Existing large ships are not required to install GMDSS equipment until February 1999.

The rule change exempts GMDSS-equipped vessels from the radiotelegraph requirement of the Communications Act, provided that each vessel is inspected by the Commission, or its designee, and is issued a Safety Certificate or endorsement. The Commission noted that the U.S. Coast Guard intends to accept the Safety Certificate or endorsement as *prima facie* evidence that the GMDSS has been installed and found to be operating properly.

The Commission stated that this action will reduce economic burdens for vessel operators, enhance worldwide competition in the shipping industry by eliminating a requirement generally applicable to only U.S. vessels and increase safety at sea by promoting the timely implementation of the GMDSS.